continuous supply of borrowed capital—both fixed and working capital. Any failure of the commercial banking system to function normally therefore has its direct effect upon every phase of financial and business activity. Commercial banking thus does something more than to supply exchange media and to facilitate the marketing of goods without the use of money. It controls and conditions all business activities; it is the foundation of the whole complex financial and economic organization of modern society.

Finally, the conception of commercial banking in its relation to the entire economic system that has just been outlined has led to a very considerable modification of my views in the matter of price theory. When one conceives the price problem as merely one of comparing the total quantity of goods that has been produced with the quantity of circulating media available for exchanging them, he arrives at certain conclusions. When one considers the relation of commercial banking to productive and financing activities, to the rest of the financial system, and particularly to the phenomena of the business cycle, he is, I believe, certain to find that new light will be shed upon all the controversial issues of monetary theory. At any rate, this has very definitely been the case in my experience.

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ADDENDUM

I have been asked to describe the two courses which follow Mr. Moulton's course in Financial Organization, and with that course make up the year's work in finance and risk-bearing which is required of all students in our School of Commerce and Administration Before describing the content of the courses, however, it may be well to indicate their place in the curriculum. In the Freshman year, our students regularly take one combination business and economics subject throughout the year, the usual sequence being Industrial Society, Business Administration, and Value and Distribution. The Economic History of the United States is sometimes taken, also, in the Spring Quarter. Throughout the remainder of his four years' course, the student's time is largely devoted to economic and professional business courses. Approximately one-half of these studies are general in character, and are required of all students of the School. The other half includes the advanced courses in his own field, with opportunity to include advanced courses in other related

fields. Required courses in English, psychology, geography, and language pretty well complete his program, there being comparatively little opportunity for the inclusion of courses not directly pointed toward his professional training.

In regular sequence the students take accounting and finance throughout the Sophomore year. These two subjects make up two-thirds of his work. Each class meets five times a week. Six sections are provided. We have never tried a plan of lecture groups and quiz sections in this subject.

The course in Financial Organization discussed by Mr. Moulton is given in the Autumn Quarter, and is followed in the Winter Quarter by one in Business Manager's Administration of Finance, and in the Spring Quarter by one in Risks of Capital. Sections of Financial Organization are also provided for Arts, Literature, and Science students in quarters other than the Autumn, but the other two courses are at present provided only for students in Commerce and Administration.

The course in Business Manager's Administration of Finance is intended to furnish, as its title indicates, a survey of the whole field of financial management. The larger portion of the work is drawn from material usually given in courses in corporation finance. Texts by Lough, Lyon, Walker, and Mead have all been used extensively, and we expect to draw heavily on Dewing next year. Naturally, in an eleven or twelve weeks' survey it is impossible to treat fully all questions which could properly be brought up in such a study. In selecting material for presentation, every effort is made to emphasize the points which are likely to be made of theoretical or practical significance to those students who are not planning to become financial specialists, leaving the material which is of interest only to such specialists for advanced courses. This distinction, indeed, is fundamental to our entire curriculum, and is one of the chief reasons for our cutting loose, to the extent that we have cut loose, from the traditional methods of organizing work in economics and commerce.

In the section of the Business Manager's Administration of Finance dealing with corporation problems, forms of capitalization are studied in considerable detail. Descriptions of the organization of various corporations are distributed in mimeograph form for individual study and class discussion. Dividend policy, amortization and refunding of bond issues, combination, segregation, and reorganization are all studied so far as possible through the presentation of concrete material for analysis. This year, for instance, in my own sections, almost the entire discussion of the issuance of refunding mortgage bonds was centered around the prospectus of a recent issue of first and refunding bonds by the Kansas City Power and Light Company.

In the latter part of the course the traditional field of corporation finance is forsaken, and attention is given to problems arising in connection with the issuance of short-time obligations, and the management of "working capital." The outline of this section is as follows:

THE CONTROL OF WORKING CAPITAL

I. Nature of working capital; sources from which obtained.
II. Calculation of amount required.
  1. Relation of working capital to turnover volume of business, credit terms, etc.
III. Administration—bank credit.
  1. The use of bank credit as permanent working capital or for seasonal demands.
  2. Essentials of credit.
    a) Personal factors.
    b) Property—collateral loans; the financial statements as a basis of bank credit.
    c) Discounting receivables; the trade acceptance.
    d) Choice of a bank.
IV. Administration—trade credit.
  1. Use of trade credit as a source of working capital.
    a) Cash discounts; keeping credit good.
  2. Extension of credit.
    a) Credit policies.
    b) Collection policies and devices.
V. Variation in capital requirements.
  1. Seasonal fluctuations—budgets; investment for slack seasons.
  2. Cyclical.
    a) Financial policy and the business cycle.
  3. Individual—emergency financing.
VI. Special problems and methods of special lines of business.

Outside of Lough's text the books on corporation finance give comparatively little assistance on these problems. We have had to gather the material from periodical literature and fugitive sources. Particular emphasis is laid on Parts III and V of the outline. Balance sheets of selected companies illustrating conditions in different stages of the business cycle are utilized to a considerable extent. It may be added that this part of the course is still distinctly in the making, and the outline is entirely tentative. Credit and collection policies, included in the outline under the administration of trade credit, belong quite as logically in the course in marketing, and for the present at least those topics are being dealt with there rather than in this course.

The Business Manager's Administration of Finance is followed in the Spring Quarter by a course given under the name of Risks of Capital. This course is made up chiefly of material usually given in theoretical courses on the relation of risk to profit and interest and value, together with parts of that presented in descriptive courses under the titles of speculation, investments, and insurance. Here again no attempt is made to cover the field in exhaustive fashion, except in the treatment of speculation. An advanced course in

investments is taken by practically all students whose special interest is in finance, and further work in insurance for students who expect to enter that field of employment is planned, though not offered at present. In this course it is intended to cover simply the amount of material which every professional student of business can fairly be expected to include in a four years' course covering both his general business and his specialized training.

To some the elements combined to make up this course will perhaps seem incongruous, and it may be suspected that the principle of selection was that of lumping together in the Spring Quarter's work the things which seemed not to fit well into the courses outlined for the Autumn and Winter. Such a procedure might be justifiable, but it is believed that a course on Risks of Capital has stronger defense. The course grew out of an attempt to organize the study of business activities in terms of certain basic functions which are performed by business managers in the service of society. Numerous classifications of economic activity in terms of function have been attempted, about the only point of agreement between them, apparently, being the distinction between the service of supplying capital and that of performing labor. Students of the theory of distribution have always analyzed these services into two parts, one involving a cost, the other a risk. Thus our current explanations of the rate of interest are built in large part around the distinction between pure interest, the compensation for the use of capital, and a premium for risk-bearing. Wage theorists generally recognize a similar twofold basis for the wage rate. It has not been usual, however, to make much use of this distinction as a means of analyzing business institutions and practices; the course under discussion is an attempt to utilize it in promoting an understanding of our financial system.

The connecting thread which runs throughout the course is the influence of uncertainty. Indeed, it might be clearer to designate the course as a study of the influence of uncertainty on business affairs. Throughout most of our academic studies of business management, emphasis is laid upon the importance of certainty. In other words, we are taught that real management, efficient management at least, involves scientific investigation to ascertain the important facts which bear upon our problems and careful study to insure that our plans shall reflect the significance of those facts. There is no disposition here to belittle this doctrine. One of the principal objects of college education for business is to indicate the value of modern methods of scientific analysis as developed by students of psychology, geology, engineering, economics, statistics, accounting, and other sciences. Nevertheless, there are definite limits to the application of scientific method in business. The business problem is not merely a scientific problem. The choice between two policies or lines of action is comparable not to the solution of an algebraic equation, a type of problem in which two trained minds may be expected to arrive invariably at the same conclusion. Rather it is like the translation of an inscription on a defaced monument where some of the words can be deciphered with ease,

some can be made out with the aid of photography, and some can only be conjectured. To ignore the possibilities of photography is to reduce the chances of success, but the use of such methods in solving the problem leaves room for disagreement still. It is this element of uncertainty which makes necessary the exercise of what we call business judgment. One function of the course is to bring the student to appreciate the limited possibility of acting on knowledge and the value of a technique for estimating probability. The two principal topics, insurance on the one hand and speculation and investment on the other, serve to bring out well the difference between the two fundamental bases for a judgment of probability, in the one case a mathematical formulation based on careful statistical investigation, in the other a comparison of data which rarely if ever suffice to make the whole situation clear or even to permit an exact mathematical estimate of the chances of success or failure.

The outline of the course is as follows:

RISKS OF CAPITAL

I. Introductory.
  1. Concepts of risk, uncertainty, probability, etc.
  2. Sources of risk.
  3. Cost of risk.
  4. Ways of dealing with risk.
    a) Elimination.
      (1) Individual control.
      (2) Social control.
      (3) Forecasting.
      (4) Combination of risks.
    b) Transfer to others.
      (1) Labor for wages.
      (2) Loaning or hiring out of capital for interest.
      (3) Insurance.
      (4) Contracting out.
      (5) Hedging.
    c) Assumption.
      (1) Speculation.
      (2) Business enterprise in general.

II. Risk and interest, wages, profits.

III. Speculation, investment, and gambling.
  1. Introductory survey.
  2. The security market, organized and unorganized.
    a) How to buy and sell—the technique of the market.
    b) When to buy and sell—forecasting for the general business situation; the swings of the stock market and of the bond market; the technical position.
    c) What to buy or sell—the analysis of securities.

d) Summary and conclusions—security investments and speculation as a means of making money; social utility of the security market.

3. Speculation in land and commodities (organized and unorganized).

IV. Insurance and suretyship.
1. Life insurance.
2. Property insurance.
3. Miscellaneous types of insurance.
4. Guaranty and suretyship.

The outline does not indicate the relative emphasis given to these topics. Nearly half the time is spent on insurance, and about half the rest of the time is given to speculation. For the present the subject of social insurance is omitted as it seems to fit better in the sequence of courses in labor than it does here. Attention is given, however, to insurance to protect employers against the hazard occasioned by risk of accident to employees. Marine insurance is at present omitted, also, on the assumption that the limited group of students interested in the subject will all take courses in foreign trade, in which the subject can be treated for their benefit more adequately than would be worth while in a general course required of all students in the School of Commerce and Administration.

The material is drawn from a wide variety of sources. We lean quite heavily on Huebner's works on insurance and on the *Yale Readings in Insurance*. Atwood's *Speculation and the Exchanges* is used a great deal in the section dealing with that subject. A large number of readings from scattered sources are used in mimeographed form, and a considerable amount of material has been prepared especially for the course. It is hoped in the course of another year to get this material in shape to secure the judgment of a larger number of teachers on its value.

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